

E. M. Oettinger

THE POLICY SCIENCES CENTER, INC.

YALE LAW SCHOOL, ROOM 216
YALE UNIVERSITY
127 WALL STREET, NEW HAVEN, CONN. 06520

CHAIRMAN:
MYRES S. McDOUGAL
VICE CHAIRMAN:
W. MICHAEL REISMAN
EXECUTIVE DIRECTOR:
JEREMIAH B. McKENNA
(203) 432-1993

Please reply to:

7106 Bells Mill Rd.
Bethesda, MD 20817
(301)-365-5241 (voice)
(301)-657-4214 (fax)

January 15, 1993

Dr. Joshua Lederberg
Rockefeller University
1230 York Ave., Box 400
New York, NY 10021

Dear Dr. Lederberg:

Recently, in your capacity as a Trustee of the Carnegie Corp. of NY, I wrote to you about our International Scientific Networks initiative.

We wish to explore a novel approach to planning, which may be of special interest to Rockefeller University. We suggest building the designs of one or more of the prototype networks inductively, with leading researchers in each field of science specifying the components that will support the productive use of their own time (and for researchers in their labs) and might facilitate the international creative process related to their areas of inquiry.

This approach involves, in effect, asking each senior research scientist to discuss the intellectual structure of their areas of work, the sociology of the invisible colleges in their field, and identifying the distinctive value that might be obtained by adding video capabilities and desktop systems, rebroadcasting existing research colloquia (e.g., would all research colloquia at Yale or Duke Medical Schools, or NIH, be valuable?), etc.

This approach to planning might learn lessons from text-based computer conferencing, where issues of quality control emerge, and too much information of little or no value pours in. And this method of designing prototypes - knowing the names of who the system is trying to support, and the problems they are working on - allows us, in principle, to evaluate what we're doing, and draw future lessons about the international creative process and how to improve the contribution of these new technologies.

At Harvard, Tony Oettinger has suggested that there are at least two sociological levels of scientific creativity that require distinct attention. The first involves senior researchers, whom we would naturally approach and whose designs for their fields and invisible colleges might provide

stimulating programming that R&D-oriented companies and government funders would quickly support. The second level, however, involves junior faculty (and perhaps post-docs and advanced graduate students). Thus, the overall design probably ought to include an underground capability that, like ARPA-Net, allows a kind of loosely-policed system that has no official ties to official grant requests, has unused after-hours capacity, etc.

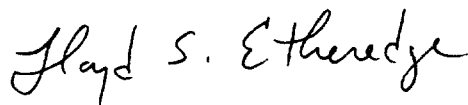
This leads to a more involved level of discussion. But I wanted to mention it, because we are keenly aware that many institutions and scientific fields, with stakes in this new technology, need to be involved to realize its promise. I would hope, genuinely, that the Carnegie Corp. of New York, following the completion of the Carnegie Commission on Science, Technology, and Government, now might play a leading role to help our working group to put all of these pieces together and assure a first-class job. And perhaps senior researchers at Rockefeller University might wish to play a leading role in the design process in their fields.

My own background includes graduate work with Harold Lasswell (the co-founder of our Center) and 8 years on the faculty at MIT as a colleague of the late Ithiel de Sola Pool (I also am editor for his scientific papers). More recently, I was Director of Graduate Studies for International Relations at Yale for 2 years (among other positions) and this pro bono project has developed, in part, from these sources and in conversations with members of Paul Kennedy's working group concerned with identifying global trends and creating attractive elements of a new world order.

If it can begin planning in the near future, and work together, the international scientific community will have a degree of monopoly in the contents of these networks. We believe a useful - and perhaps substantial - cash flow can be organized from R&D-oriented companies and other sources. Thus one possibility we hope to evaluate is whether an equity-participation enterprise might be formed to create these networks more quickly. I am enclosing a brief worksheet outlining several possible sources of revenue: we have asked Mr. Tisch, on the Board of the Carnegie Corp., if he could help with the numbers, and to identify elements of the plan that could generate revenue for the international scientific community without compromising the integrity of the vision.

Thank you for your attention to these matters. We need to begin organizing in the near future, just ahead of the technology and the market forces. We hope the Carnegie Corp. of NY can help to develop this unique opportunity.

Sincerely,

A handwritten signature in cursive script that reads "Lloyd S. Etheredge".

(Dr.) Lloyd S. Etheredge, Director
International Scientific Networks Project